

■ MILES G. NICHOLLS, Feature Editor, Graduate School of Business, RMIT University

## The Research Group Framework: A Strategic Approach to Undergraduate Research Experiences in Colleges and Schools of Business

by Kenneth R. Bartkus, Utah State University

This essay proposes the 'Research Group' framework as a means of enhancing undergraduate research experiences (URE) in colleges and schools of business. Organized along the lines of a scholarly think tank with faculty serving as 'managing partners' and students as 'associates,' the framework provides an effective means of preparing students for success in graduate school and their chosen careers. In this essay, I articulate the underlying framework, the challenges of developing a formal undergraduate research program, and invite further discussion on the role of undergraduate research in business schools.

There is little doubt that undergraduate research experiences provide meaningful benefits to students, faculty, universities, and society. Elgren and Hensel (2006), for example, note that "Inviting students to invest intellectually in a project gives them the opportunity to help shape its direction, exert some of their own creativity, and experience the joy of intellectual 'ownership' of the products resulting from the effort." Similarly, Schneider (2004) maintains that undergraduate research programs can "result in more successful and competitive alumni, serve as a selling point for recruiting freshman, provide positive publicity, lead to greater overall productivity, and impart a more mature learning atmosphere." Lopatto (2006) suggests that undergraduate research contributes to the personal development of students including growth in self-confidence, increased tolerance for obstacles,

interest in the discipline, and a sense of accomplishment. Gates et al. (1999) maintain that undergraduate research helps better prepare undergraduate students for graduate research requirements. Finally, Ulmbach and Porter (2002) found that faculty contact with students and a research emphasis had a "significant impact on satisfaction with education in the major and the perceived impact that college had on skill development."

Unfortunately, too few colleges and schools of business participate in undergraduate research. In particular, while the number of bachelor's degrees conferred in the U.S. is approximately 22 percent of the total (U.S. Department of Education 2006), undergraduate business projects at the 2007 National Conference on Undergraduate Research (NCUR) represented only 2.3 percent of the total. Given that NCUR is the major national conference for disseminating undergraduate research, the relative lack of participation by business schools is telling.

With that said, it is important to acknowledge that there are valid reasons for not implementing a formal undergraduate research program (e.g., lack of funding, lack of a research emphasis, few incentives). I believe, however, that another reason is the lack of a well-defined framework. The purpose of this essay, therefore, is to address this issue by presenting a framework that was used by the Jon M. Huntsman School of Business to develop The Research Group™. A recipient of the 2008 "Exemplary Model" award from the American Association of



**Kenneth R. Bartkus**

*is a professor of marketing and director of undergraduate research for the Jon M. Huntsman School of Business, Utah State University. He is founder and current director of The Research Group™. He serves on the*

*editorial review board of the Journal of Travel Research and is associate editor of the Journal of Cooperative Education and Internships. He also served as the 1998 proceedings coordinator of the Decision Sciences Institute. He is a four-time recipient of the Outstanding Undergraduate Mentor of the Year for the Huntsman School of Business.*

ken.bartkus@usu.edu

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University Administrators, the remainder of this essay describes The Research Group in more detail. In this regard, four fundamental elements of the program will be discussed: (1) mission, (2) administrative structure, (3) guiding principles, and (4) implementation challenges.

With regard to the mission, The Research Group has been designed as a scholarly think tank comprised of business and university scholars, corporate leaders, and qualified undergraduate students who are dedicated to the advancement of high quality research experiences. In this sense, its core purpose is to provide students with the opportunity to develop competencies in the use of the scientific method as it relates to business and public policy issues. In turn, these competencies prepare students for greater success in graduate school and their chosen careers. To provide philosophical guidance, the motto of The Research Group is *Veritas et Virtus* (Truth and Knowledge).

To support the mission, an administrative structure was developed to reflect a real-world business organization. In doing so, the structure sought to bridge the gap between purely educational and purely work environments. This led to the following:

1. Director: Responsible for coordinating the research activities of the group and to serve as a liaison to the business community and college/university administration.
2. Managing Partners: Business scholars who are responsible for coordinating individual projects in their respective business disciplines, and serve on the advisory board for the program.
3. Faculty Partners: Business scholars who participate in student/faculty research collaborations. Faculty Partnerships are open to all faculty at the university.
4. Corporate Partners: Recognized industry leaders who provide advisory counsel to the group and serve as liaisons to the business community.

5. Associates and Senior Associates: students engaged in collaborative research with faculty.

An important benefit of this structure is that it allows recognition of faculty and student contributions that might otherwise be overlooked in less formal models. For example, students can list their participation on their resumes as work experience (e.g., students can participate in the program as an internship experience). Similarly, faculty can list mentoring as service, teaching, and research activity. Finally, the structure helps communicate the benefits of the program to relevant stakeholders (such as students, future employers, graduate schools, the state legislature, and boards of regents and trustees, among others).

Goals and objectives were then developed to serve as guiding principles:

1. Undergraduate Research Experiences should be meaningful.
  - Meaningful research experiences promote an understanding of the scientific method and its application to business-related issues. The scientific method is at the core of business and an understanding of its application to solving business questions is essential.
  - Meaningful experiences meet the career and academic interests of students. They are not simply another hurdle in the education experience.
  - Undergraduate research experiences are time efficient. Most projects can be completed in one academic year or less.
  - Meaningful research experiences involve students as collaborators rather than merely assistants. The real world will treat graduates as part of a team and not as students. The research group framework helps facilitate this transition.
2. Undergraduate research experiences prepare students for graduate study.
  - The program prepares students for graduate study, where an un-

derstanding of the principles of scientific inquiry are essential.

3. Undergraduate research experiences involve presentations.
  - Presentation of research allows students to gain valuable experience that will be useful in graduate school and/or their chosen careers.
  - Students are encouraged to present at national, state, and regional venues specifically dedicated to for undergraduate research (e.g., National Conference on Undergraduate Research) as well as professional conferences.
4. Undergraduate research experiences include participation in Research Forums/Symposiums at the university.
  - Research Forums/Symposiums within the school of business allow students to share ideas and develop an esprit de corps.
5. Undergraduate research programs participate in scholarly organizations dedicated to undergraduate research.
  - The National Council on Undergraduate Research is the major organization dedicated to student achievement in research. It is administered through the contributions of interested faculty. Many states and regions are also developing their own organizations to promote undergraduate research.
  - The Council on Undergraduate Research is the major organization dedicated to faculty development in the area of undergraduate research. Faculty play an important role in the direction of the organization.

Despite these guiding principles, there are additional challenges such as the identification and qualification of students, the recruitment and motivation of faculty, the identification of meaningful projects, and the identification of appropriate research venues.

With regard to academic standards, we started with grade point average (i.e., 3.50 or above). While somewhat arbitrary, we reasoned that the program needed to be selective given limited faculty resources. Similarly, we considered setting limits based on class level (e.g., junior and above), but ultimately felt that this was overly restrictive. In this regard, it was argued that we could have a stronger influence if we attracted the most qualified students early in their academic careers. Two of our most productive associates began their involvement with The Research Group as first-year students.

Perhaps the most difficult challenge has been to determine whether or not a particular student has the "right stuff." We found that while some students expressed interest in undergraduate research (and met the academic standards), they did not appear to have the intellectual maturity to be successful in the program. Oftentimes, we only found this out after the student was admitted to the program. As such, we believe it is important to select students based on both merit and potential.

To address this challenge, we typically ask students to submit a one-page essay outlining their educational/career goals and, in addition, why they are interested in undergraduate research. In doing so, we can better evaluate a student's overall potential. In some cases, we also conduct personal interviews. This process is not unlike those commonly used by universities to award scholarships and, in doing so, helps avoid costly selection errors.

A second challenge concerns the need to attract and motivate qualified faculty. To meet this challenge, we sought to have undergraduate research mentoring formally recognized at both the college and university level. For example, in the Huntsman School of Business, we designate an undergraduate research mentor of the year. The mentor is also formally recognized at the university level.

We have also argued that undergraduate research mentoring should be recognized in the promotion and tenure process. First, we have sought to include

reference to undergraduate research mentoring in the role statements of tenure-track faculty. In addition, we have recommended that it to be included in the formal university guidelines for tenure and promotion.

A third challenge is the identification of meaningful research. Since incoming students do not ordinarily have the requisite skills to develop research proposals on their own, we typically start their experience by having them participate in a project that has already been at least partially conceptualized by the faculty mentor. In doing so, the background work has already been established which thereby allows the mentoring process to be more effective and efficient. As students gain more experience, they are then able to develop projects on their own.

The downside of this process is that faculty are sharing some of their own research with students. Thus, care should be taken in the allocation of projects. For example, a project that requires significant preparation by the professor is not a good candidate for a student/faculty collaboration. Instead, smaller projects that require less preparation are typically more suitable.

### Conclusion

The Research Group in the Jon M. Huntsman School of Business has resulted in a framework that facilitates quality undergraduate research experiences for students. Students in our program have presented at such undergraduate research venues as Research Day at the State Capital in Salt Lake City, the National Conference on Undergraduate Research, and the Utah Conference on Undergraduate Research. Additionally, many of our students have collaborated with faculty on publications in scholarly journals and conference proceedings. We believe that much of this success is the result of using a formalized approach to undergraduate research experiences. To this end, we would like to broaden this approach by proposing the development of a consortium of business schools who could work together to promote greater

synergies in undergraduate research. Perhaps the formation of a special interest group within the Decision Sciences Institute and/or the inclusion of an undergraduate student track at national and regional conferences would help facilitate this objective. At a minimum, we hope that this essay serves to promote greater discussion and debate regarding the importance of undergraduate research.

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